Mental Health Services Research

National Institute of Mental Health

The National Institute of Mental Health (NIMH) develops and provides research information that will help people with mental illness get the best possible care. Mental health services research integrates research, practice, and policy to improve treatment and services for people with mental illness. Grounded in "real-world" settings, it looks at patients, providers, managed care, and state mental health systems. New knowledge gained through research leads to improved public mental health in meaningful and measurable ways.

Health services research examines the effects of social factors, financing systems, organizational procedures, health technologies, and personal behaviors on quality, cost, and access to health care, and ultimately, our health and well-being. Research involves individuals, families, organizations, institutions, communities, and populations. It may encompass academic institutions, large state-wide service systems, and methods of "front-line" clinical care.

Mental health services research looks at how traits of individuals, their families, and social and cultural environments affect whether, where, and when people will seek care, the types of care chosen or provided, what happens during care, and outcomes. Social, cultural, and psychological characteristics of providers and their interaction with patients are also considered.

Services research takes into account the economic, social, political, and cultural environments in which services are delivered. This information affects the organization, financing, management,

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An NIMH Snapshot

The National Institute of Mental Health (NIMH) is one of 27 components of the National Institutes of Health (NIH), the Federal Government's principal biomedical and behavioral research agency. NIH is part of the U.S. Department of Health and Human Services. The FY 2003 budget for NIMH is approximately $1.3 billion.

NIMH Mission

The NIMH mission is to reduce the burden of mental illness and behavioral disorders through research on mind, brain, and behavior. This public health mandate demands that we harness powerful scientific tools to achieve better understanding, treatment, and eventually, prevention of these disabling conditions that affect millions of Americans.

To fulfill its mission, the Institute:
■ conducts research on mental disorders and the underlying basic science of brain and behavior;
■ supports research on these topics at universities and hospitals around the United States;
■ collects, analyzes, and disseminates information on the causes, occurrence, and treatment of mental illnesses;
■ supports the training of more than 1,000 scientists to carry out basic and clinical research; and
■ communicates information to scientists, the public, the news media, and primary care and mental health professionals about mental illnesses, the brain, mental health, and research in these areas.

delivery, and access to services, as well as the course, cost, and outcomes of care.

Translating scientific breakthroughs into policies and procedures of clinical practice is an urgent, essential, and achievable task. A report by the NIMH National Advisory Mental Health Council, *Bridging Science and Service*, established that the Institute's research must be useful and practical for people with mental illnesses, clinicians, purchasers, and policy makers. The report recommended that NIMH expand efficacy, effectiveness, practice, and systems research in order to foster research across fields and speed the dissemination of important findings.[1]

The NIMH Services Research Program

NIMH services research is housed primarily in the Division of Services and Intervention Research.[2] Research addresses services for the seriously mentally ill; the effectiveness of public, private, and community-based care; the economics and financing of mental health services, such as the impact of insurance design and the costs and benefits of delivery systems; care quality that examines treatment guidelines and outcomes; research methods; training; and the social and cultural contexts of mental health care treatment, acceptance, and delivery.

With some 280 grants in the portfolio, ten of the programs include research centers and training grants. Given the breadth of services research, the Division of Mental Disorders, Behavioral Research, and AIDS (DMDBA) also supports studies. The Center for Mental Health Research on AIDS services portfolio has relevant programs in adherence, stigma, and health behavior spread throughout various branches. Services

research ranges from population-specific initiatives involving childhood and adolescence, primary care, HIV and AIDS, financing, and rural research to primary care, dissemination, and implementation studies to improve clinical practice.

Examining managed care systems and access barriers to treatment is part of the mental health services research agenda. Studying financing among employers, insurers, and patients can affect whether treatments for illnesses are available, who receives them, and the costs and quality of care. Sixty NIMH studies contributed to the research base for evaluating mental health parity.

Breadth of NIMH Services Research
- Child & Adolescent
- Primary Care
- Quality of Care & Outcomes
- Financing & Managed Care
- Systems Research
- Sociocultural
- Research Methods
- Clinical Epidemiology
- Dissemination Research
- Disablement & Functioning

Interventions That Work

Many who are discharged from psychiatric inpatient facilities need assistance in community settings. Continued medication, rehabilitation and vocational assistance, and social support are of critical importance to help ensure successful treatment. Services should be flexible and adaptable to needs, preferences, and expectations.

For more than two decades, researchers have been working to develop and refine models that will provide the care people need, but not rob them of self-

determination. One successful model, the Program for Assertive Community Treatment (PACT), was designed to engage the client and provide services in client-based settings with multidisciplinary teams and individual care plans.

Assertive community treatment (ACT) assists people most seriously disabled by their mental illness—whether schizophrenia, bipolar disorder, or depression, with or without co-occurring substance abuse—and are most at risk for rehospitalization. The treatment method was devised to provide support for people with limited problem-solving skills whose symptoms worsen rapidly when they are under stress.

Those receiving ACT services have fewer days in the hospital; for people with a history of chronic hospitalization, ACT is also cost effective. Some studies show gains in quality of life and function. As a result of that evidence, the director of the Health Care Financing Administration, renamed the Centers for Medicare and Medicaid Services, advised state Medicaid directors to support assertive community treatment programs of the Schizophrenia Patient Outcomes Research Team (PORT) funded by NIMH and the Agency for Health Care Policy and Research.

Care for people with severe mental disorders in community settings will continue to be a challenge for those providing care or organizing systems that respond to need. The research investment in PACT and other community-based approaches has produced knowledge on setting up programs that can reduce hospitalization and address the needs of clients living in the community.

Infrastructure Development

The initiatives are setting standards for scientific rigor and relevance. A new grant is focusing on infrastructure development in "real-world" settings with a training program to facilitate collaborative clinical research and team building among clinicians and investigators.

A family services agency in New York City is partnering with 16 clinical sites and an academic institution to improve mental health care and study important research questions on child trauma and posttraumatic stress disorder (PTSD). An infrastructure will be created to conduct studies of trauma screening and treatment and to evaluate the system's ability to support the collaborative research. The project will assess screening methods for childhood victimization/trauma history in a large clinical service delivery system and compare the efficacy of treatment for children and youths with PTSD to usual care in a complex clinical service delivery system.[3]

Another grant aims to develop a sustainable mental health research infrastructure to support clinical trials and effectiveness studies on the detection, diagnosis, treatment, and prevention of mental disorders in incarcerated adults. The Center for Correctional Mental Health Services Research is a collaboration between the State of Connecticut Department of Correction, Correctional Managed Health Care, and the University of Connecticut Health Center. The initial research project will examine the effectiveness of a validated treatment approach, the Texas Implementation of Medication Algorithm (TIMA), when it is modified and applied in a correctional setting. TIMA is an evidence-

based protocol for diagnosis, clinical case management, and psychoeducation. Bipolar disorder was selected as the target illness because of its prevalence and adverse impact on clinical and behavioral management in correctional settings, as well as on readjustment and recidivism after reentry in the community.[4]

Now-or-Never Research

Another type of grant encourages research to take place in "real time," in other words, not coinciding with the normal NIH grant cycle. It enables researchers to take advantage of now-or-never opportunities. If someone is going to make a major change in a health care system on July 1, for example, researchers have an opportunity to study that change and expedite a grant submission for the funding cycle.

A proposed time-sensitive study of 488 homeless children in 300 families will supply important information on how providing services and housing for homeless families affects the mental health and behavior of homeless children over a 15-month period. The parent grant, funded by the Substance Abuse and Mental Health Services Administration, focuses on the outcomes of mothers. With funds to supplement this clinical trial, researchers will study the children, who may be major beneficiaries.

By working with mothers, teachers/caregivers, and the children themselves, NIMH researchers suggest that interventions may lead to lower levels of neighborhood and environmental stressors, increased family support, and changes in mothers, which in turn result in better parenting and services to children. Because of this research, the county where the study is

taking place has agreed to base future decisions on organizing services.[5]

Improved Data on Family Intervention Research

Another study is an enhancement of a statewide effectiveness trial using a home-based family preservation model for families who are at risk for child neglect. Previous studies have shown modest behavioral changes and reduced maltreatment recidivism. The proposed study would establish a data collection system for existing state-funded home-based service agencies serving over 1,200 new families annually. Independent data collectors will test the importance of intervention and collect post-treatment follow-up information to evaluate gains.[6]

A Call for Innovation

A new announcement, "From Intervention Development to Services Research," aims to encourage research on developing or pilot testing new or adapted interventions; pilot testing interventions that demonstrate efficacy in broader scale effectiveness trials; or on innovative services research requiring preliminary testing or development. It provides resources to evaluate the feasibility, acceptability, and safety of novel approaches to improving mental health, modifying health risk behavior, and obtaining data needed for a larger scale intervention or services study.[7]

In another announcement, NIMH and the Substance Abuse and Mental Health Services Administration (SAMHSA) are partners in supporting evidence-based mental health treatment practices in state mental health systems. NIMH is funding

states that determine the most effective ways to implement evidence-based practices in state clinical practices; SAMHSA aims to provide direct support to states and localities committed to adopting these practices.[8]

Partnerships, both within the federal government and beyond, are enhancing research opportunities in the field. The Center for Medicare and Medicaid Services (CMS), formerly the Health Care Financing Administration, has a large quality improvement program using peer review organizations. Last year CMS funded two projects in mental health. One program is looking at improving screening for depression and another is studying care for people who have just had heart attacks.

Other grants include:

Helping homeless men transition from hospital to the community.

This controlled study involves a Critical Time Intervention (CTI) for men and women with severe mental illness during the transition from psychiatric hospital to community care. The grant's primary aim is to diminish homelessness. Suicidal thinking and behavior, violence toward others, and psychiatric rehospitalization may also decrease. A key aspect of CTI is that staff who have established relationships with patients during their institutional stay continue to work with them during the post-discharge phase of the intervention.

CTI does not replace community treatment and supports, but complements available services. CTI has demonstrated effectiveness with severely mentally ill men following discharge from psychiatric care in a shelter institution to community care. State officials write that if this program is successful, they will not only implement it in their state, but will also reimburse it.[9]

The labor force, outreach, and treatment for depression.

With this grant, five large employers will screen tens of thousands of people for depression. An effectiveness study will evaluate the impact of depression outreach treatment on work-related behaviors. Researchers will make detailed assessments of sickness absence, job-related accidents, work quantity and quality, relationships, and job turnover. Those with the disorder will be in a number of intervention programs. Cost benefit analysis will estimate the net benefit of the program to employers.

Participating companies are American Airlines, Delta Airlines, the Massachusetts State Employees Association, Northeast Utilities, and Raytheon. The program aims to show employers that depression interventions are investment opportunities with positive returns. Regional business groups on health and behavioral health management consultants will work with researchers to create purchaser demand for more depression treatment. This rapid and widespread dissemination will augment the knowledge base of treatment effectiveness in an important "real-world" setting.[10]

Improving Hispanic retention in antidepressant therapy.

A pilot study with depressed, culturally traditional Hispanics entering antidepressant therapy suggests that cultural differences in patients' and psychiatrists' expectations and concerns about treatment produce ambivalence about taking medication or following physician instructions, which in turn interferes with retention. The association between

ambivalence about treatment and dropout is predicted by stages that individuals experience during behavioral change, a model that has not been empirically tested in Hispanics. This study will yield pilot data on stages of behavioral change using a brief, effective form of psychotherapy that targets ambivalence about treatment and on enhanced retention of Hispanics in antidepressant therapy.

The goal is a culturally compatible intervention for psychiatrists in outpatient pharmacological practice to increase retention of Hispanics with major depressive disorder (MDD). Hispanic dropout from medication therapy for MDD is two to three times the rate of non-Hispanic whites. Mental health treatment in general is lowest among less acculturated, migrant Hispanics, even after controlling for socio-economic factors and psychiatric diagnosis, suggesting that cultural factors are causes.[11]

American Indian and Alaska Native mental health research.
The University of Colorado Health Sciences Center has obtained support to continue the highest quality research on the mental health of these special populations. Research program and training opportunities address assessment, epidemiology, and prevention of psychological dysfunction and major mental illness among American Indians and Alaska Natives. The program aims to carry out interdisciplinary research with emphasis on assessing dysfunction and major mental illness among children, adolescents, and adults; service use among the Indian population at large and within service settings, as well as gauging outcomes of mental health services; the development, adaptation, implementation, and evaluation of preventive intervention

programs for children and youth; structuring training as an integral part of the research program; and disseminating results to guide the design, conduct and interpretation of future mental health services in Alaska Native and American Indian communities. The project will assist individuals and organizations to plan and implement mental health research; continue to enhance the growing body of knowledge on mental health and mental illness among these populations; and serve as a catalyst for both programmatic and theoretical research.[12]

Medical practice patterns involving children with autism.
Clinical studies are addressing the safety and effectiveness of treatment and rehabilitation interventions for children with autism or pervasive developmental disorders. This multisite study examines the structure, utilization, and expenditures for the care and treatment of autism. The three-year study will identify services accessed by families with autistic children in different age groups. The work will provide information to clinical researchers and policymakers on which treatments are used, by whom, treatment combinations, and circumstances under which they apply. Research results can inform clinical trials and future projects, which may involve multiple medical, educational, and behavioral treatments, as well as complementary and alternative treatments. This first grant for the services portfolio in autism received funding recently.[13]

Fostering collaboration between mental health and criminal justice.
This Development Research Centers grant explains symptoms and treatment of severe mental illness in minor offenders to the

criminal justice staff. By establishing the Mental Health Services and Criminal Justice Research Center, the program focuses on mental health services issues that arise when people with mental illness encounter the criminal justice system. A multi-disciplinary team will be in a borderless research environment that includes researchers and sites located around the country. The emphasis is on the individual with mental illness, how that person comes to the attention of the criminal justice (CJ) system, and the system's response to the person's illness as he or she moves from court to jail/prison to the community. Understanding this dynamic is central to developing prevention strategies. Research will address identification and evaluation of mental illness, its treatment inside the jail and in the post release period, and the policy initiatives and innovations that impact the CJ system's response to mental illness.[14]

A business research grant offers a two-day curriculum for professionals working with adult offenders with co-occurring disorders. It aims to improve mental health and substance abuse services both within the criminal justice systems and during and after community reentry. Addressing the interface between substance abuse, mental health and criminal justice, the program aims to develop ongoing collaborative implementation plans. The five modules include: Overview and Mapping the System, Screening and Assessment, Treatment Issues and Strategies, Systems Integration, and Blueprint for Action. Cultural competence and the special needs of women are included. Case study materials include examples appropriate for both institutional and community settings.[15]

Research Goals, Direction

In April 2002 NIMH conducted a workshop entitled "Evidence in Mental Health Services Research: What Types, How Much, and Then What?"[16] to stimulate interest in the field and funding projects. The conference addressed types of evidence needed; methods to acquire, rank, and quantify it; and how best to broadcast and use the evidence we have. Experts from the mental health community and related fields presented research on mental health policy and management, innovations in trials, mental disorders and work functioning, using sociocultural research, primary care interventions, mental health disparities among underserved populations, diagnostic and service use, cost versus care, and attitudes toward stigma.

A large task facing the field of mental health services research is determining the best ways to disseminate information on effective treatments and services in diverse settings to improve care for those with mental disorders. The workshop focused on the challenge of weaving together research, practice, and policy to improve care. It established goals to promote interaction between practitioners, researchers, policymakers, and consumers regarding evidence in mental health services research. Mental health services research aims to:

■ present innovative conceptual and theoretical models for considering evidence and its use in mental health services research;

■ propose alternative methodologies, especially from traditionally underutilized disciplines, to address the evidence questions above;

■ present research findings from successful and unsuccessful attempts to

move evidence into real world settings;

■ promote interaction between practitioners, researchers, policymakers, and consumers regarding research on evidence in mental health services research;

■ link trainees with more seasoned researchers; and

■ promote collaborations between mental health services researchers and other less utilized research disciplines.[17]

Senator William Frist, M.D., called for an improved NIH framework in an editorial in the *Journal of the American Medical Association.*[18] "Greater efforts are needed to help research discoveries into practice and apply them to patients," he wrote. Senator Frist reinforced the services research vision of translating scientific knowledge into improved public health. Mental health services research in communities will ultimately benefit medical practice and patient care. A broadened NIH framework will translate scientific knowledge into practice by incorporating advancements, fostering partnerships, and increasing quality care for people with mental disorders.

Services research aims to inform the provision of consistent quality care across all settings for all people who suffer from mental disorders and their loved ones, and to improve all outcomes, especially functioning and reintegration.

The Broad NIMH Research Program

NIMH supports and conducts a broad-based, multidisciplinary program of scientific inquiry aimed at improving the diagnosis, prevention, and treatment of mental disorders in people of all ages. Increasingly the public, as well as health care professionals, are recognizing these disorders as real and treatable medical illnesses of the brain. Still, there is a need for more research that examines in greater depth the relationships among genetic, behavioral, developmental, social, and other factors to find the causes of these illnesses. NIMH is meeting this need through a series of research initiatives.

■ **NIMH Human Genetics Initiative**
This project has compiled a large repository of clinical information and DNA obtained from families affected by schizophrenia, bipolar disorder, autism, Alzheimer's disease, and other mental disorders. Qualified scientists are given access to these data and genetic materials in order to characterize the genetic bases of mental disorders. See **http://www.nimh.nih.gov/ research/geneticsinitiative.cfm** for more information.

■ **Neuroinformatics: Human Brain Project**
This federal effort is using state-of-the-art computer science technologies to organize the immense amount of data being generated through neuroscience and related disciplines, and to make this information readily accessible through the World Wide Web for simultaneous study by interested investigators. Because the scope of the Human Brain Project extends to all facets of brain and behavioral research and includes a range of technology sciences, this initiative is sponsored, in a coordinated fashion, by fifteen federal organizations across four federal agencies: the National Institutes of Health, National Aeronautics and Space Administration, National Science Foundation, and U.S. Department of Energy. For additional detailed information see **http://www.nimh.nih.gov/ neuroinformatics/index.cfm.**

■ **Prevention Research Initiative**
Prevention research can be broadly characterized as seeking to understand the

development and expression of mental illness throughout the course of life so that appropriate interventions can be designed and applied in order to prevent mental disorders and promote mental health. Advances in biomedical, behavioral, and cognitive sciences led NIMH to formulate a plan, *Priorities for Prevention Research at NIMH* (**http://www.nimh.nih.gov/publist/ 984321.htm**), which marries these sciences to prevention efforts. Focusing on the expansion of prevention research to include the prevention of relapse, disability, and co-occurring conditions, the plan provides a blueprint for NIMH prevention research in the years to come.

Key Areas of NIMH Research

In total, NIMH supports more than 2,000 research grants and contracts at universities and other institutions across the nation and overseas. It also conducts basic research and clinical studies at its own facilities on the National Institutes of Health campus in Bethesda, MD, and elsewhere. Key areas of NIMH research include:

■   basic research on behavior, emotion, and cognition to provide a knowledge base for a better understanding of mental illnesses;

■   basic sciences, including cellular and molecular biology, developmental neurobiology, neurochemistry, neurogenetics, and neuropharmacology, to provide essential information about the anatomical and chemical basis of brain function and brain disorders;

■   neuroscience and behavioral aspects of acquired immune deficiency syndrome (AIDS) and behavioral strategies to reduce the spread of human immunodeficiency virus (HIV);

■   clinical trials to test interventions to treat, prevent, and reduce the frequency of mental disorders and their disabling

consequences;

■   mental health services research, including mental health economics and improved methods of services delivery;

■   co-occurrence among mental disorders and with substance abuse and other medical conditions, such as depression and heart disease;

■   the prevalence of mental disorders;

■   risk factors for mental disorders and protective factors against them;

■   suicide, suicidal behavior, risk and protective factors, and preventive interventions;

■   differences in mental health and mental illness among special populations;

■   children and adolescents who suffer from or who are at risk for serious mental disorders and learning disabilities;

■   aging and mental health, including the impact of caregiving;

■   responses to terrorist acts and major traumatic events; and

■   psychotherapies and pharmacotherapies for specific disorders.

For More Information

The NIMH Office of Communications carries out educational activities, such as the *Real Men, Real Depression* campaign (**http://menanddepression.nimh.nih.gov**), and publishes and distributes research reports, press releases, fact sheets, and informational materials intended for researchers, health care providers, and the general public. All of these materials, and this fact sheet, are in the public domain and may be copied or reproduced without permission from the Institute, although citation of NIMH as the source is appreciated. Materials may be downloaded directly from the NIMH Web site, or hard copies may be ordered through the mail.

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